Bringing HD to Life

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High-Definition Audio-Video Network Alliance (HANA)

PRESENTATION TO THE FCC

NOVEMBER 2007

HANA's Mission: Enable easy connection of multiple entertainment devices

- Facilitates interoperability
- Eliminates consumer frustration
- Requires only one IEEE 1394 (Firewire) connection (port) per device

HANA's Members

- Cable Operators: Cablevision, Charter
- Content Providers: NBC Universal, Warner Brothers
- Consumer Electronics: JVC, Mitsubishi, Samsung
- IT Companies: IBM, Sun
- Semiconductor Suppliers: Texas Instruments, AMD, Analog Devices

BENEFITS OF IEEE 1394 INTERFACE

- Established in 1995 as an open standard
  - Fierce competition among chipset suppliers continues to drive down costs
- Capable of securely and reliably transmitting up to 8 simultaneous real time HD streams over existing coaxial cable or CAT5 wiring (400 Mbps)
  - Roadmap to double capacity
- Offers unparalleled content protection
  - Supports both Digital Transmission Content Protection (DTCP) with 5C and DTCP IP with AES-128 encryption
- Easy to use; consumer friendly
- Does not require a host device (such as a PC)
  - 1394 devices can be connected peer-to-peer with no need for hubs, switches or routers
- Fully compatible with IP – but offers better quality of service

FCC REQUIREMENT FOR 1394 AND SUBSEQUENT DEVELOPMENTS

- Cable operators must include a 1394 port on all high-definition set-top boxes (STBs) by July 1, 2005 (Section 76.640(a)(4)(ii), adopted in Second Report and Order (2003)

- Nearly 25 million STBs with 1394 have been deployed already

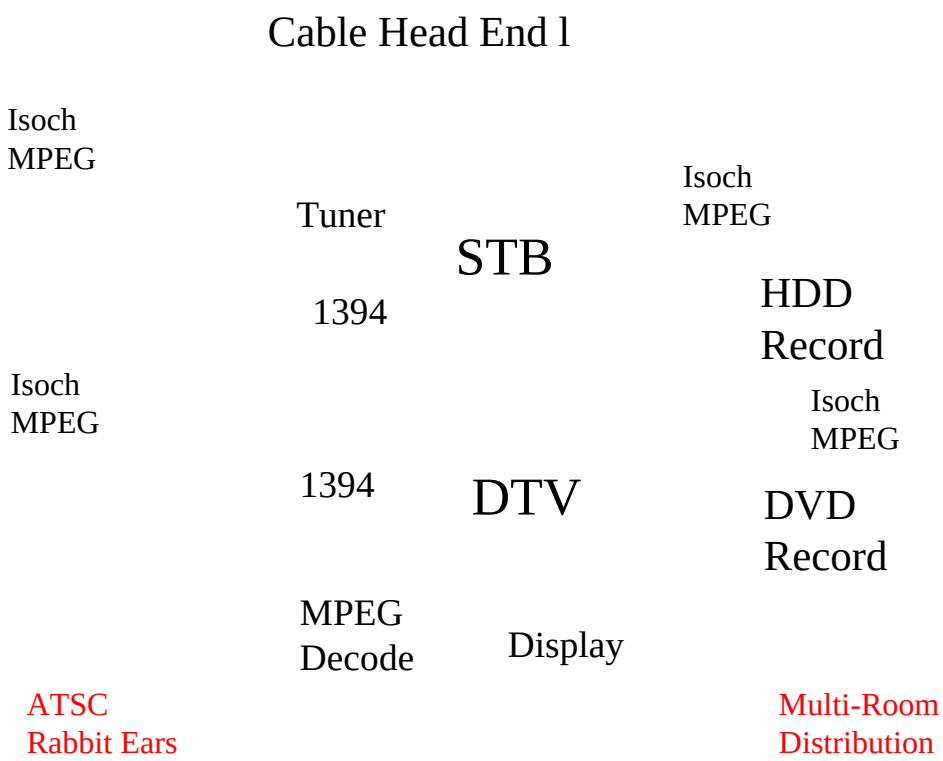
- 1394 ports are provided in tens of millions of other consumer devices
  - 55% of laptops (including all Apple laptops)
  - Over 70% of DVD recorders
  - Many HD and standard definition digital TVs

1394 WILL FACILITATE THE DTV TRANSITION FOR CONSUMERS

- 1394 allows off air broadcast channels not carried by MSOs to be viewed throughout the house (if STB enables fully functional 1394 ports)
- Cable operators increasingly are transmitting digital programming to their subscribers
- 1394 will significantly increase consumer choice in recording digital programming provided by cable operators
- 1394 interface enables consumers to record digital programming to stand-alone devices
  - 1394 is currently the only way for consumers to digitally record programming without relying on a hard drive provided within the STB
  - 1394 will enable consumers to digitally record HD programming to portable storage or media devices, allowing consumers to watch such programming anywhere and anytime

HANA and 1394 are technologically advanced for AV distribution

- 1394 is a natural fit for ATSC\terrestrial broadcasts
- Internet Protocol (IP) is carried over 1394 most effectively
- 1394 carries video more efficiently than broadband
- Used by Broadcasters and Professional video editing



FCC SHOULD MAINTAIN & CLARIFY 1394 REQUIREMENT FOR CABLE SET-TOP BOXES

- 1394 satisfies all the parameters and key considerations for interoperability sought by the FCC, and cited by those who filed comments
- 1394 provides ease of use, quality of service and unparalleled content protection
- The incorporation of 1394 into high definition cable STBs has benefited, and will continue to benefit, consumers, the cable industry, the consumer electronics industry and the content community.
  - 1394 is already widely deployed in STBs and consumer electronics devices
- 1394 is the best solution available today – and getting better